| | Application No. | Applicant(s) |
|---|---|---|
| **Notice of Allowability** | 10/734,783 | GONDHALEKAR ET AL. |
| | Examiner | Art Unit | |
| | Michael Y. Won | 2155 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *amendment filed November 14, 2007 and interview conducted on December 5, 2007*.

2. ☒ The allowed claim(s) is/are *1-5, 8-9, 11-17, 19-21, 23, 25-34, 38, 41-54 (renumbered 1-43)*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None  of the:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached

       1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

    Paper No./Mail Date _____ .

    **Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *attached* .

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

/Michael Won/
Primary Examiner

## EXAMINER'S AMENDMENT

1.    An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

2.    Authorization for this examiner's amendment was given in a telephone interview

with Elizabeth Ruzich (Reg. No. 54,416) on December 5, 2007.

3.    The application has been amended as follows:

2. **(Currently Amended)** The multimedia scheduler of Claim 1, further

comprising: at least one properties file;

at least one property manager, wherein said property manager provides access

to application properties, said application properties stored in any of said property file

and a configuration database;

at least one database;

at least one database connection manager for managing access to data sources,

wherein said database connection manager comprises an access point to connect to

said database;

at least one communication module for accepting requests on a server socket

and calling appropriate routines to fulfill the requests;

at least one rules factory, wherein said rules factory maintains a cache of rule objects in memory;

at least one utility thread, wherein said at least one utility thread comprises any of: a property refresher thread, a GC (garbage collection) thread for memory management and a logfile rotator thread;

at least one logging system, wherein said logging system records transactions and activities; and

at least one work creator factory, wherein said work creator factory is created during initialization of said work manager;

at least one data cache, wherein said data cache caches data common to all scheduler objects and data that change infrequently, and wherein a static data cache object contains a concrete data cache instance for each data source defined on a system; and

at least one main application thread wherein said main application thread comprises a starting point for said multimedia scheduler and wherein said main application thread initializes main components within the multimedia scheduler.

3. **(Currently Amended)** The multimedia scheduler of Claim 2, wherein said predefined criteria comprise any of programming rules, a rotation pattern for each channel, and rotation codes assigned to individual media items.

4. **(Currently Amended)** The multimedia scheduler of Claim 3, Wherein said media items comprise digital recordings of songs.

5. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 2, wherein said rules objects implement a rules interface.

8. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 2, wherein properties are loaded into a properties object in said property manager when said property manager is initialized by said main application thread.

9. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 2, wherein said property manager includes a method for refreshing properties at regular intervals, wherein said method is called by one of said utility threads.

11. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 9, wherein said database connection manager maintains a thread-local cache of connections for each thread.

12. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 9, wherein said database connection manager provides a connection pool to each data source.

13. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 9, wherein said database connection manager provides a thread-local cache of connections for each thread.

14. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 12, wherein said database connection manager includes methods for getting connections; returning connections; and flushing a thread local cache.

15. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 12, wherein said connection pool performs a sanity check on each connection requested from said pool by creating a dummy prepared statement, and executing it.

16. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 15, wherein said connection pool discards a connection if an exception is thrown.

17. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 12, wherein the connection pool opens a new connection if one is unavailable from the pool.

19. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 2, wherein a port number for said socket is configured in said property file.

20. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 2, wherein said requests comprise XML (extensible markup language) strings.

21. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 2, wherein said requests include strings for:

    stop;

    abort;

    channel_schedule;

    status;

    ping;

    rotate_logfile; and

    refresh.

23. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 2 wherein a sleep interval for each utility thread is configured in said properly file.

25. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 2, wherein logging behavior is configurable by means of a logging properties file.

26. **(Currently Amended)** The multimedia scheduler of Claim 2, wherein

scheduler objects comprise work creator objects and wherein associating a scheduling

scheduler object with a producer thread comprises wrapping a work creator object with

a producer thread.

27. **(Currently Amended)** The multimedia scheduler of Claim 26, wherein said

work creator objects encapsulate song and/or ad scheduling logic, wherein said work

manager is independent of said song and/or ad scheduling logic.

28. **(Currently Amended)** The multimedia scheduler of Claim 27, wherein said

scheduling logic includes processes for any of:

scheduling songs on stream-based channels;

scheduling ads on stream-based channels;

scheduling songs on clip-based channels; and

scheduling ads on clip-based channels.

29. **(Currently Amended)** The multimedia scheduler of Claim 28, wherein said

ads are provided by a third party.

30. **(Currently Amended)** The multimedia scheduler of Claim 28, wherein said

ads are provided in buckets, wherein a bucket is associated with a channel.

31. **(Currently Amended)** The multimedia scheduler of Claim 27, wherein said

work creator objects create work objects representing tasks to be performed.

32. **(Currently Amended)** The multimedia scheduler Of Claim 27, wherein work

creator objects are created by at least one work creator factory.

33. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 26, wherein said work manager further comprises at least one delete symlink (symbolic link) thread.

34. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 26, wherein said work manager further comprises at least one monitoring thread.

38. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 2, wherein a data cache refresher thread reloads cached data, and wherein a refresh interval is specified in said property file.

41. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 2, wherein said main application thread waits for a 'stop' or 'abort' request after initializing said main components.

42. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 2, wherein said main application thread includes a monitor, wherein a socket listener thread notifies said monitor when a request is received by a server socket.

43. **(Currently Amended)** The <u>multimedia</u> scheduler Of Claim 42, wherein an 'abort' request stops said <u>multimedia</u> scheduler immediately.

44. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 42, wherein a 'stop' request allows the <u>multimedia</u> scheduler to stop so that:

work managers are stopped;

a cleanup of the database connection manager is performed; and

the application is exited.

45. **(Currently Amended)** The multimedia scheduler of ~~Claim 39~~ Claim 2, wherein said main application thread includes a plurality of public static methods to control and report on the multimedia scheduler.

46. **(Currently Amended)** The multimedia scheduler of ~~Claim 39~~ Claim 2, wherein said main application thread constitutes a class.

47. **(Currently Amended)** The multimedia scheduler of Claim 2, wherein said properties file controls behavior of said multimedia scheduler and specifies parameters to tune said multimedia scheduler.

48. **(Currently Amended)** The multimedia scheduler of Claim 47, wherein said properties file specifies at least:

work manager properties;

scheduler object properties;

scheduler-wide properties;

rules module properties;

property manager properties; and

database connection pool properties;

49. **(Currently Amended)** The multimedia scheduler of Claim 2, wherein said database comprises a plurality of tables, and wherein said at least one work manager and said property manager access said database.

50. **(Currently Amended)** The multimedia scheduler of Claim 49, wherein said tables include tables for at least:

current state of multimedia scheduler wherein said state is persistently saved;

an exception log for recording events, wherein events include rule violations;

enumeration of log messages;

associating rotation patterns to a channel;

rotation patterns created by DJ's;

rule definitions;

associating rules to a channel;

defining channel specific rule values; and

channel configset.

51. **(Currently Amended)** The multimedia scheduler of Claim 50, wherein said tables further include:

channels;

channel-specific ads;

channel-specific playlists;

playlists;

playlists of clips;

clips;

encoding formats;

song location; and

song metadata.

52. **(Currently Amended)** The multimedia scheduler of Claim 1, wherein said multimedia scheduler creates schedules for clip-based channels.

53. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 1, wherein said

<u>multimedia</u> scheduler creates schedules for stream-based channels.

54. **(Currently Amended)** The <u>multimedia</u> scheduler of Claim 1, wherein said

services are broadcast at different bit rates.


### *Allowable Subject Matter*

4.      Claims 1-5,8-9,11-17,19-21,23,25-34,38,41-54 (renumbered 1-43) are allowable

over prior art of record in light of the arguments presented in the Amendment filed

November 14, 2007 and the Examiner's Amendment above.


5.      Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee.  Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."


6.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael Y. Won whose telephone number is 571-272-

3993.  The examiner can normally be reached on M-Th: 7AM-5PM.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Saleh Najjar can be reached on 571-272-4006.  The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


/Michael Won/

Primary Examiner

December 5, 2007